



## AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

RECEIVED

JUN 12 2003

TECHNOLOGY CENTER R3700

### LISTING OF CLAIMS

- Sub B*
1. (currently amended) A composite acetabular component, comprising:
- a ceramic insert member having an inner surface and an outer surface;
- and
- a biocompatible thermoplastic backing member molded onto the outer surface of the ceramic insert member when the biocompatible thermoplastic backing member is in a substantially softened state;
- a,*
- wherein the outer surface of the ceramic insert is provided with a texture so as to increase the mechanical bonding between the biocompatible thermoplastic backing member and the outer surface of the ceramic liner member.
2. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the ceramic insert member has a substantially hemispherical shape.
3. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the texture comprises a roughened surface.

4. (currently amended) The ~~invention~~ composite acetabular component according to Claim 3, wherein the roughened surface has an arithmetical mean roughness in the range of about 5 to about 10 microns.

5. (currently amended) The ~~invention~~ composite acetabular component according to Claim 3, wherein the roughened surface has a ten-point mean roughness in the range of about 50 to about 75 microns.

6. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the texture comprises a surface depression.

a. 7. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the texture comprises a roughened surface and a surface depression.

8. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the biocompatible thermoplastic backing member has a substantially hemispherical shape.

9. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the biocompatible thermoplastic backing member is comprised of polyethylene.

10. (currently amended) The ~~invention~~ composite acetabular component according to Claim 1, wherein the biocompatible thermoplastic backing member is comprised of ultra high molecular weight polyethylene.

11. (currently amended) A composite acetabular component, comprising:

a ceramic insert member, the ceramic insert member having a substantially hemispherical shape, the ceramic insert member having an inner surface and an outer surface; and

a biocompatible thermoplastic backing member molded onto the outer surface of the ceramic insert member when the biocompatible thermoplastic backing member is in a substantially softened state, the biocompatible thermoplastic backing member having a substantially hemispherical shape, the biocompatible thermoplastic backing member having an inner surface and an outer surface;

wherein the outer surface of the ceramic insert is provided with a roughened texture so as to increase the mechanical bonding between the inner surface of the softened biocompatible thermoplastic backing member and the roughened texture of the outer surface of the ceramic liner member.

12. (currently amended) The ~~invention~~ composite acetabular component according to Claim 11, wherein the texture comprises a roughened surface.

13. (currently amended) The ~~invention~~ composite acetabular component according to Claim 12, wherein the roughened surface has an arithmetical mean roughness in the range of about 5 to about 10 microns.

14. (currently amended) The ~~invention~~ composite acetabular component according to Claim 12, wherein the roughened surface has a ten-point mean roughness in the range of about 50 to about 75 microns.

15. (currently amended) The ~~invention~~ composite acetabular component according to Claim 11, wherein the texture comprises a surface depression.

16. (currently amended) The ~~invention~~ composite acetabular component according to Claim 11, wherein the texture comprises a roughened surface and a surface depression.

17. (currently amended) The ~~invention~~ composite acetabular component according to Claim 11, wherein the biocompatible thermoplastic backing member is comprised of polyethylene.

18. (currently amended) The ~~invention~~ composite acetabular component according to Claim 11, wherein the biocompatible thermoplastic backing member is comprised of ultra high molecular weight polyethylene.

19. (currently amended) An acetabulum replacement system,  
comprising:

- an acetabulum member;
- a composite acetabular component, comprising:
  - a ceramic insert member having an inner surface and an outer surface;
- and
  - a biocompatible thermoplastic backing member molded onto the outer surface of the ceramic insert member when the biocompatible thermoplastic backing member is in a substantially softened state;
  - wherein the outer surface of the ceramic insert is provided with a texture so as to increase the mechanical bonding between the biocompatible thermoplastic backing member and the outer surface of the ceramic liner member; and
  - a securing mechanism for securing the acetabulum member to the composite acetabular component.

20. (currently amended) A hip replacement system, comprising:

- an acetabulum member;
- a composite acetabular component, comprising:
  - a ceramic insert member having an inner surface and an outer surface;

and

- a biocompatible thermoplastic backing member molded onto the outer surface of the ceramic insert member when the biocompatible thermoplastic backing member is in a substantially softened state;
- wherein the outer surface of the ceramic insert is provided with a texture so as to increase the mechanical bonding between the biocompatible thermoplastic backing member and the outer surface of the ceramic liner member;
- a femoral component having a ball-shaped portion adapted to be received in the composite acetabular component; and
- a securing mechanism for securing the acetabulum member to the composite acetabular component.

21. (currently amended) A method of making a composite acetabular component, comprising:

- providing a ceramic insert member having an inner surface and an outer surface;
- providing a biocompatible thermoplastic material;
- imparting a texture to the outer surface of the ceramic insert member;
- softening the biocompatible thermoplastic material; and
- contacting the textured outer surface of the ceramic insert member with the softened biocompatible thermoplastic material for a sufficient period of time to form a biocompatible thermoplastic backing member onto the textured outer surface of the ceramic insert member;

wherein the texture of the outer surface of the ceramic insert member increases the mechanical bonding between the biocompatible thermoplastic backing member and the outer surface of the ceramic liner member.

22. (currently amended) The ~~invention~~ method according to Claim 21, wherein the ceramic insert member has a substantially hemispherical shape.

23. (currently amended) The ~~invention~~ method according to Claim 21, wherein the texture comprises a roughened surface.

24. (currently amended) The ~~invention~~ method according to Claim 23, wherein the roughened surface has an arithmetical mean roughness in the range of about 5 to about 10 microns.

25. (currently amended) The ~~invention~~ method according to Claim 23, wherein the roughened surface has a ten-point mean roughness in the range of about 50 to about 75 microns.

26. (currently amended) The ~~invention~~ method according to Claim 21, wherein the texture comprises a surface depression.

27. (currently amended) The ~~invention~~ method according to Claim 21, wherein the texture comprises a roughened surface and a surface depression.

28. (currently amended) The ~~invention~~ method according to Claim 21, wherein the biocompatible thermoplastic backing member has a substantially hemispherical shape.

29. (currently amended) The ~~invention~~ method according to Claim 21, wherein the biocompatible thermoplastic backing member is comprised of polyethylene.



30. (currently amended) The ~~invention~~ method according to Claim 19,  
wherein the biocompatible thermoplastic backing member is comprised of ultra high  
molecular weight polyethylene.

---



## AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 2. The attached sheet, which includes Figure 2, replaces the original sheet including Figure 2.

Attachment: Replacement Sheet 2 of 7

**RECEIVED**

**JUN 12 2003**

TECHNOLOGY CENTER R3700